

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

JEON, You Moon

Application No.: 10/575,147

Confirmation No.: 7284

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Art Unit: 1626

For: PHOSPHORUS-CONTAINING CATALYST
COMPOSITION AND HYDROFORMYLATION
PROCESS USING THE SAME

Examiner: KOSACK, JOSEPH R

AFFIDAVIT UNDER 37 CFR § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

DECLARATION OF <DONGHYUN KO>

I, <Donghyun Ko>, do hereby declare the following:

I have conducted experiments regarding the present invention, and I respectfully submit the experimental results as discussed below.

Comparative Example 4: Hydroformylation of propene using acetylacetonatodicarbonylrhodium (Rh(AcAc)(CO)₂) catalyst and 1,1'-biphenyl-2,2'-diyl-bis(dipyrrolylphosphoramidite) (BPO-P(Pyl)₂)

The experiment for catalytic activity was performed in the same manner as in

Example 1 of the present application except that BPO-P(PyI)₂ was used alone as a ligand and a molar ratio of ligand to rhodium was 3. The results are shown in Table 3.

Comparative Example 5: Hydroformylation of propene using acetylacetonatodicarbonylrhodium (Rh(AcAc)(CO)₂) catalyst and eicosyl phobane (EP)

The experiment for catalytic activity was performed in the same manner as in Comparative Example 4 of the present application except that EP was used instead of BPO-P(PyI)₂ as a ligand, and a molar ratio of ligand to rhodium was 3. The results are shown in Table 3.

Comparative Example 6: Hydroformylation of propene using acetylacetonatodicarbonylrhodium (Rh(AcAc)(CO)₂) catalyst, 1,1'-biphenyl-2,2'-diyl-bis(dipyrrolylphosphoramidite) (BPO-P(PyI)₂) and eicosyl phobane (EP)

The experiments for catalytic activity were performed in the same manner as in Comparative Example 4 of the present application except that BPO-P(PyI)₂ and EP was used instead of BPO-P(PyI)₂ as a ligand, and molar ratio of ligand to rhodium was 3. The results are shown in Table 3.

• Table 3

	Catalyst	Ligand 1 (L1)	Ligand 2 (L2)	L1/Rh mol/mol	L2/Rh mol/mol	N/I	Catalytic activity (mol _(BAL) /mol _(Rh) /h)
Comparative Example 4	Rh(AcAc)(CO) ₂	BPO-P(PyI) ₂	-	3	-	13.9	149.8
Comparative Example 5	Rh(AcAc)(CO) ₂	-	EP	-	3	1.35	136.8
Comparative Example 6	Rh(AcAc)(CO) ₂	BPO-P(PyI) ₂	EP	3	3	16	8.5

I further declare that all statements made herein of my own knowledge are true, and that all statements on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Donghyun Ko
<Name of Inventor
or person doing the experiment>

13. Aug. 2009
Date